Abstract

The adverse effect of the deviation of a polarized component on measurement of an optical characteristic is prevented. A second measuring section (25) determines group delay times (τ_{pg}, τ_{sg}) of the incident light entering an optical fiber (18) from the exit light emerging from the optical fiber (18). If there is any deviation along the p- or s-polarization axis of the amplitude equivalent value (power) measured by a first measuring section (24) (namely, $T_{11}^2 \ll T_{21}^2$, $T_{11}^2 \gg T_{21}^2$, $T_{12}^2 \ll T_{22}^2$, $T_{12}^2 \gg T_{22}^2$), an optical characteristic measuring section (26) determines group delay times (τ_{11}, τ_{21}, τ_{12}, τ_{22}) from the components of the transfer function of the optical fiber (18). Therefore, even if there is any deviation along the p- or s-polarization axis of the amplitude equivalent value (power) measured by the first measuring section (24), the group delay times are determined on the basis of the results of measurement (not influenced by the deviation along the p- or s-polarization axis of the power) by the second measuring section (25). As a result, the adverse effect of the deviation of a polarized component on measurement of an optical characteristic is prevented.